

*Papilio fuscus capaneus*

Butterfly & Other  
Invertebrates Club Inc.  
Newsletter

## CLUB PLANNING AND ORGANIZING GROUP - 2000

President:	Helen Schwencke	07 3844 6677
Vice President:	John Moss	07 3245 2997
Treasurer:	Rob MacSloy	07 3824 4348
Secretary:	Rosylin Popple	07 3398 8365
Newsletter:	Daphne Bowden	07 3396 6334
Librarian:	Terri Wolf	07 3814 3841
Register of Host Plants:	Rob MacSloy	07 3824 4348
Publicity:	Lois Hughes	07 3206 6229
Others:	Lindsay Popple, Kay McMahon	

## PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter.  
See BOIC Programme.

## CONTACT ADDRESS

PO Box 2113, Runcorn 4113, Queensland

## AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

## NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:

March issue – February 21<sup>st</sup>

June issue – May 21<sup>st</sup>

September issue – August 21<sup>st</sup>

December issue – November 21<sup>st</sup>





## EDITORIAL

Wow, 19 editions later, and having celebrated our 6th anniversary at the excursion we held to Murdoch deBaar's garden, we're still going great guns! Murdoch's garden was especially wonderful because he has managed to maintain a breeding population of Azure butterflies in a suburban garden. In theory this is a highly complicated arrangement between mistletoes, host plants, butterflies and guardian ants, but in practice, it is eminently achievable. This is just the sort of backyard (well front yard in Murdoch's case) thing the club is trying to popularise. Well done Murdoch!

This is the last edition before our AGM. I'd like to encourage you to come along and see what's happening. Members are involved in a broad range of activities, and they need to be commended for the great work they're doing. The venue for the meeting is a revegetation site where a member of the Club is working with the Scouting Association's Dutton Park Group to develop a butterfly teaching habitat. It is developing into a wonderful resource. Come along and see for yourself. Many people avoid AGMs because they're scared they'll be roped into something - We promise we won't. Your presence, however, will be useful to ensure that we have a quorum.

*Helen Schwencke*

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## Murdoch De Baar's Garden – Saturday 28<sup>th</sup> October 2000

Although the weather was very ordinary which meant we saw very few butterflies (or other invertebrates) this day turned out to be one of the most enjoyable outings the club has been involved in.

After meeting at Sherwood Arboretum, we proceeded to Murdoch's place at Corinda where he showed us around his garden and the host plants he is growing. The list is quite extensive and included:

*Gahnia melanocarpa*, *Gahnia aspera*, *Lomandra longifolia*, *Harpullia pendula*, *Cupaniopsis anacardiodes*, *Trophis (Malaisia) scandens*, *Melodorum (Rauwenhoffia) leichhardtii*, *Pipturus argenteus*, *Hoya australis*, *Passiflora* sp., *Verbena bonariensis*, *Plumbago auriculata*, *Aphananthe philippinensis*, *Pseuderanthemum variabile*, *Trema tomentosa (aspera)*, *Citrus* sp., *Ficus* sp., *Oplismenus* sp.

In addition to these (and others I've missed) Murdoch had the mistletoes *Dendrophoe vitellina* and *Notothixos incanus* growing on *Callistemon* sp. and *Amyema conspicuum* growing on Crepe Myrtle – the last mentioned providing the highlight of the day (and the year for me!!)

With such a wide and varied array of plants it was not surprising to hear that Murdoch had had a huge number of invertebrates visit the garden and he was able to show us two cases containing hundreds of different species – butterflies, moths, cicadas, ants, beetles, native bees (over 50 different species!!!) and others. It really showed us all the diversity of life that can occur in a suburban garden.

We had intended to return to the Arboretum for a barbecue but Murdoch and Glenda kindly invited us to stay and save the travel to and fro. After a pleasant meal (enlivened by champagne to celebrate the club's sixth birthday) it was nearly dusk and time for the "pièce de resistance" – the emergence of the *Ogyris zosine* larvae and their attendant ants.



*Ogyris zosine* larva  
and attendant ants

Shortly after moving into the house Murdoch noticed a pair of "Azures" fly over the house. Following them to the front yard and watching the pair spiral down to land on the road he was able to catch and identify them as Northern Purple Azures (*Ogyris zosine*). Subsequent investigation of the bases of the Crepe Myrtle trees (which were carrying the mistletoe *Amyema conspicuum*) revealed a small colony of larvae and ants (*Camponotus* sp. (*claripes* group)).

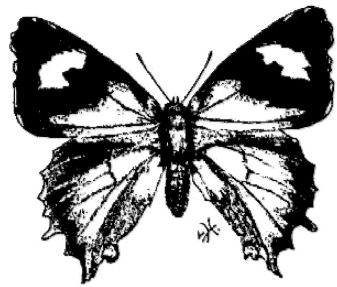


The colony was only small and space for expansion negligible so Murdoch decided to create artificial nests for the ants which he did by using hollowed out branches of Umbrella trees and tying these in the branches of the trees.

The effort was successful and the colony has prospered and grown and we were now to see the fruits of his labour.

As the light faded the ants moved from the nests and began to herd the larvae towards their night feeding stations. This took some time and it was amazing to watch larvae from first, right through to final instar, begin their journey towards the mistletoe. When all the larvae were on their way it was estimated that there were hundreds of them – a very healthy colony indeed.

This was a special moment for all those privileged to see it and our thanks go to Murdoch for sharing his garden with us.



*Ogyris zosine*

*Rob MacSloy – 11.2000*

## REPORTS

### Butterflies and Ants

Presented by Rod Eastwood to a joint meeting of the Brisbane Butterfly and Invertebrates Club and the Redlands Branch of the Society for Growing Australian Plants on 26<sup>th</sup> July, 2000, at the Redlands Indigiscapes Centre, Capalaba.

The presentation comprised two videos on which Rod had acted as Scientific Consultant and Researcher.

**Video 1 – 'The Butterfly; Beauty or the Beast?'. Produced by the BBC (Bristol) in 1996 and narrated by David Attenborough.**

The first video covered some of the lesser known aspects of butterfly biology and behaviour. For example, there are a variety of relationships between butterflies and ants. At one end of the continuum the association is mutually beneficial, at the other, the butterfly larvae are exclusively predatory on the ants. The caterpillars communicate with the attendant ants with chemicals, sounds and vibration.

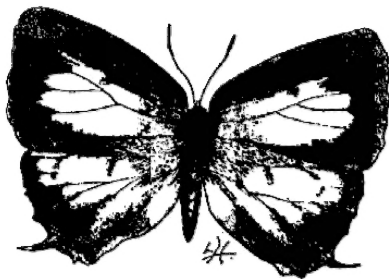
One butterfly, the Imperial Hairstreak (*Jalmenus evagoras*) lives with swarms of small black ants (*Iridomyrmex anceps*). The caterpillars are protected by the ants, which attack any predators or parasites of the caterpillars. The smell of these caterpillars mimics the ants' own smell, and the caterpillars also 'call' to the ants with sounds. The



ants form a living shield around the caterpillars, on their *Acacia* food-plant. The larva produces a rich secretion of amino acids and sugars from separate glands at the rear end of their bodies. The ants milk this liquid.

Imperial Hairstreaks pupate forming rafts of chrysalises on the food-plant. When ready to emerge the females use pheromones to signal their readiness. This attracts the males, who fly in and mate with the females as soon as they emerge from the pupa.

Small Oak Blue butterflies (*Arhopala wildei*) have a predatory relationship with ants. Ant larvae are the sole food source for the butterfly larvae. Female butterflies lay their



*Arhopala wildei*

eggs on arboreal "rattle" ant nests (*Polyrhachis queenslandica*), which the ants make by stitching together leaves. When the butterfly caterpillar emerges from the egg, it smells like an ant larvae which tricks the ants into carrying it into their nest. The butterfly larvae also produces a source of food for the ants through the glands at the end of their bodies.

To scare predators and defend their nests, "rattle" ants use their nest like a drum. When disturbed or threatened, they beat their abdomen on the nest walls, making a rattling sound, and spray formic acid into the air. Inside the nest the butterfly caterpillars are protected by the ants even while they are eating the ant larvae. Incredibly, the butterfly caterpillars have learned to mimic the ants alarm response by tapping on the nest, thereby gaining extra protection. No-one has seen a Small Oak Blue emerge from its pupa so we don't know if the ants are as kind to the imago.

In order to fly, butterflies need to be warm enough. They warm up by basking in the sun. Their wings absorb heat and transfer it to their bodies. However they can't afford to get too hot. As the right temperature is approached, butterflies change the angle of their wings to the sun or move out of the sun's glare. They fly off when the critical temperature is attained.

Butterflies burn energy when flying. They need nectar to supply this energy. Taste organs on their feet and antennae allow butterflies to know which flowers have nectar and which don't. They use a long coiled tube called a proboscis to suck up any nectar.

Besides nectar, many butterflies need to locate other substances in the environment. For example male danaid butterflies need poisonous chemicals, known as pyrolizidine alkaloids, in order to attract mates and maximise the survival chances of their offspring. They obtain these alkaloids by scratching the dried leaf surface of certain plants such as *Crotalaria*. The poisons are mixed with 'saliva' and then imbibed



through the proboscis. Other butterflies look for salts in the ashes of fires or on the ground around evaporating pools of water. This is also necessary for reproduction.

After mating, females lay eggs. From these eggs small larvae emerge. Frequently the newly emerged larvae will eat their own eggshells. Once they start eating, larvae can increase their own body weight 10,000 times in a few days. Caterpillars may be seen as high performance food processors, and butterflies could be seen as reconstituted leaves.

Butterflies are able to lift off by creating a vacuum between their wings. Engineers have been trying to determine how this is done. Insect flight muscles are the most powerful on Earth. Even old and torn butterflies can still fly gracefully.

Butterfly vision includes the ultra-violet light end of the spectrum. The fluorescent colour wing patterns have coded information for other butterflies. Females can decide if a male is of the correct species by looking for the correct UV signal.

**This was the first of two fascinating videos shown. Second video next issue. Thanks goes to Rod for providing the presentation.**

## CREATURE FEATURE

### *Papilio fuscus capaneus* (Goeze 1779)



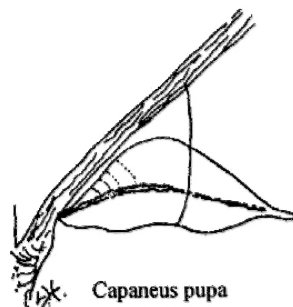
Capaneus larva

The Fuscous Swallowtail, also known as the Capaneus Butterfly, oviposited regularly on *Micromelum minutum* during the warmer months. Ova were collected and raised indoors on cut plant material. In order to keep leaves fresh for a longer period, material was recut under water.



Pupal dormancy was particularly noticeable, specimens from the same series of ova emerging months apart, the last being around 2 years after pupation. They were housed in the relatively dry environment of a household garage. No particular trigger to stimulate emergence was noticed. (More work needs to be done!)

All adults were released to take their chances in the wild.



Capaneus pupa

**Lorna Johnston – 13.11.2000**



***Micromelum minutum* – Lime Berry - Family : Rutaceae**

**Larval host for:** *Papilio aegeus aegeus* (Orchard swallowtail)

**Height:** 1-2 m. **Spread:** 1-2 m.

**Form:** Loose spreading shrub

**Flowers:** Large clusters of perfumed white flowers in terminal heads, produced in  
Spring and Summer



*Micromelum minutum*

**Fruit:** Yellow to red oval shaped berries

**Distribution:** Coastal Queensland,  
northern W.A. and N.T. Dry to moist  
rainforest.

Also seen by the author on  
Scawfell Island, N.E.Q. in sand about 100 m  
up the beach from high tide level.

**Cultivation:** Lime Berry establishes quickly  
in full sun or semi-shade. It is attractive  
when young, with glossy green leaves.  
When in flower it is a popular nectar plant  
for insects. Many species of bees, beetles,  
moths, butterflies etc. are attracted, as are  
their predators.

This makes the Lime Berry a “must have”  
for anyone interested in observing insects

and spiders at close quarters in their own garden.

The berries are eaten by small birds and mammals which is an added bonus.

The shrub can become straggly after a few years, and it is recommended that young  
plants should be raised for replacements. Water, mulch and fertilizer are important  
requirements. It prefers good drainage and a warm position.

**Propagation:** By fresh seed, which germinates readily. Mice can be a problem as they  
will eat both seeds and young seedlings. Cuttings are probably worth a try. A useful  
insect-attracting addition to the naturalist's garden.

*Lorna Johnston – 11/2000*

*Micromelum minutum* is available from Barb's Trees, 15 Jagger St., McDowall  
4053 – Ph. 07 3353 8182 (see advertisement enclosed)

AND from Toona Rainforest Gardens, Mudgeeraba Q. Ph. 07 5530 5299



## Native Mulberry as a garden tree for attracting insects and birds.

By Murdoch De Baar, Queensland Forestry Research Institute, QDPI, P.O.Box 631, Indooroopilly, Qld. 4068.

Native Mulberry *Pipturus argenteus* ( G. Forster ) Wedd. ( Urticaceae ), is here presented as a garden tree for attracting insects and birds, particularly in Queensland; and is a revised version ( De Baar 2000 ).

### ZYGAENIDAE ( Lepidoptera )

*Pollanisus eumetopus* Turner ( 'Forester' moth )

This small day-flying moth with a metallic blue abdomen and dark wings, has been recorded on Native Mulberry ( Common 1990 ). These are attractive little moths to encourage into the garden.

### LYCAENIDAE ( Lepidoptera )

*Rapala varuna simsoni* ( Miskin ) ( Indigo Flash butterfly )

A female was observed ovipositing on flowerbuds of Native Mulberry, April 1998 and a larva was subsequently observed eating flowerbuds on 4 May 1998, pupating on 7 May 1998 and emerging on 22 May 1998 at Corinda, Brisbane, Queensland.



Indigo Flash



\* Speckled Line-blue

*Catopyrops florinda halys* ( Waterhouse ) ( Speckled Line-blue )

This species is commonly encountered throughout the year at Corinda, Brisbane, on Native Mulberry, both as adults and larvae. This is an attractive little butterfly which is not shy of human presence. The larvae are attended by several ant species ( Hymenoptera : Formicidae ) such as the *Polyrhachis*.

*Erysichton lineata lineata* ( Murray ) ( Hairy Line-blue butterfly )

Females of the Hairy Line-blue butterfly occasionally land and wander around the flowerbuds of Native Mulberry, appearing to sometimes oviposit but I have not yet confirmed this.



Hairy line-blue

### NYMPHALIDAE ( Lepidoptera )

*Hypolimnas* spp. ( Eggfly butterflies )

Native Mulberry is recorded as the foodplant for both the far-northern Australian *Hypolimnas anomala* ( Wallace ) ( Common & Waterhouse 1981 ) and *Hypolimnas*





*antelope* (Cramer ) ( Parsons 1991, 1998 ). These two butterflies are known commonly as the **Crow Eggfly** and **Spotted Crow Eggfly**. The distributions of both these butterflies could extend or contract during wet or dry seasons, and adults in flight, could easily be confused with *Hypolimnys alimena* ( Linnaeus ) (Blue-banded Eggfly) females or crow butterflies ( *Euploea* spp.: Nymphalidae ) . Northern entomologists may find larvae on their Native Mulberries, and so confirm the presence of these two species.

***Mynes geoffroyi guerini* Wallace ( Jezebel Nymph butterfly )**



Jezebel Nymph

Native Mulberry is included in the foodplants of this butterfly ( Common & Waterhouse 1981 ). Jezebel Nymph ( *M. geoffroyi* ) is an attractive butterfly ranging from Ballina, New South Wales northwards to Cape York, Queensland. The larvae feed gregariously, and two batches of late-instar larvae were noted at Corinda, Brisbane, on 18 June and 26 June 1994 on Native Mulberry. These

pupated from the end of June to 10 July 1994 and emergences occurred during August and September 1994. Several batches of first-instar larvae and one penultimate-instar larva were observed on 14 June 1999 at Corinda, and again larvae were noted during July 2000. The immature stages of this butterfly suffer heavy losses from parasitic wasps ( *Brachymeria* sp.: Chalcididae ) and flies ( Diptera : Tachinidae ).

This species is recorded as usually uncommon in Brisbane suburbs, but were noted in large numbers at the base of Mt Coot-tha during early 1999 (Sands 1999).

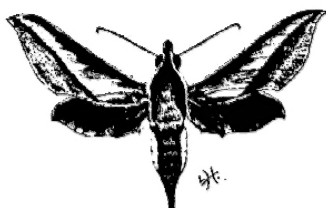
The common name of this butterfly derives from the fact that it mimics the distasteful Black or Common Jezebel ( *Delias nigrina* ).



Larvae on Pipturus

**SPHINGIDAE ( Lepidoptera )**

***Theretra queenslandi***



***Theretra* spp. ( Hawk moths )**

Native Mulberry is noted as a foodplant for *Theretra clotho celata* ( Butler ) ( Moulds 1984 ) and *Theretra queenslandi* ( Lucas ) ( Moulds 1998 ). Both species can be found from northern New South Wales to northern Queensland, and their larvae are interesting to observe on the foliage. *T. clotho* larvae can be

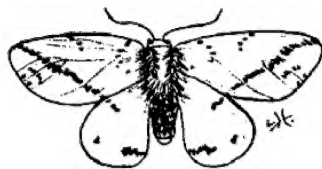




green or black with pale patches, and most segments have an eye-spot. At Corinda, Brisbane, a large parasitic fly *Blepharipa* sp. (Diptera : Tachinidae) about 15 mm in length, is often seen around the foliage, which I assume is searching for *T. clotho* larvae so often present on our tree, and sufficiently large enough for the development of the fly larva. I have bred this fly from large Lepidoptera larvae including the hawk moth *Agrius godarti* Macleay, so it is reasonable to assume that *T. clotho* is also a host.

## ARCTIIDAE (Lepidoptera)

### *Spilosoma canescens* (Butler) ('Red-bodied Tiger moth')

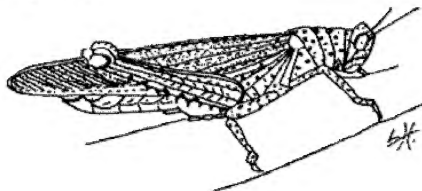


First instar larvae were collected, feeding gregariously on *Urtica* sp. (Stinging nettle: Urticaceae) at Mt Glorious, southeast Queensland, 28 Dec. 1995 by J.T. St.L. Moss and M. De Baar, and transferred (29 Dec. 1995) to Native Mulberry foliage on which they developed to maturity. *S. canescens* larvae are polyphagous.

## ACRIDIDAE (Orthoptera)

### *Valanga irregularis* (Walker) (Giant grasshopper)

This grasshopper is polyphagous, however it is very attracted to Native Mulberry leaves in my garden at Corinda, Brisbane, both as nymphs and adults. These grasshoppers are represented in a variety of colours and patterns as Jordan (1998) also mentions. See comments in DISCUSSION also.



## TETTIGONIIDAE (Orthoptera)

### *Caedicia simplex* (Common Garden Katydid)

This uniformly green, medium-sized "leaf-mimic grasshopper" is observed occasionally at Corinda, Brisbane, feeding on Native Mulberry leaves and camouflaged well within the foliage. They are active nocturnally but remain very still during the day.

## CHRYSOMELIDAE (Coleoptera)

### *Ditropidus* sp. ('Metallic-blue leafbeetle') subfamily Cryptocephalinae

Tiny 3mm long leaf beetles sunbask on our Native mulberry (and chew leaves), but what they lack in size, they make up for in colour. Bright metallic shiny blue radiates out from bright green leaves; a nice combination. These beetles fly from late August onwards.



## FORMICIDAE ( Hymenoptera )



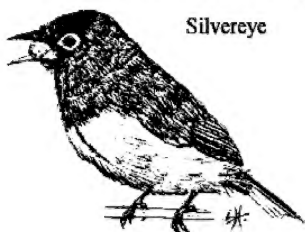
### *Polyrhachis* spp. ( medium-sized ants )

At Corinda, Brisbane, several ant species, including two *Polyrhachis* species, show a constant interest in the Native Mulberry foliage and lycaenid larvae present. *Polyrhachis* are medium-sized ants and one of these ( *P. ruffifemur* Forel, confirmed by Rudy Kohout ) is covered in a shiny gold colour. The second species often attending lycaenid larvae, is the black *P. doddi* Donisthorpe ( one of the leaf-sewing ants ). These ants are fascinating to observe, do not sting, ( although they may nip and spray ) and are not normally household pests



## DISCUSSION

Native Mulberry is a small tree to an approximate height of 5 m, with a spreading form. It requires some space in a garden, but copes well with constant pruning and high levels of feeding by various insects. This evergreen tree has attractive glossy-green leaves of up to 21 cm in length and 10 cm wide , and a natural distribution from Richmond River, northern New South Wales to Cape York, Queensland. It is related to the Gympie Gympie or Giant Stinger trees (*Dendrocnide* spp.) of which Mulberry-leaved Stinging tree (*D. photinophylla* (Kunth) Chew) is similar in appearance, however we are mercifully spared from the stinging sensations. Birds including Fig



Silveryeye

Birds ( *Sphecotheres viridis* ) and Silvereyes ( *Zosterops lateralis* ) are attracted to Native Mulberry fruit ( Jordan 1998 ), however my tree is a male but still attracts such birds as Silvereyes and Noisy Miner birds ( *Manorina melanocephala* ) to an assortment of insects present including numbers of geometrid larvae ( Lepidoptera ). The Pacific Baza (*Aviceda*

*subcristata*) is an impressive bird with chest bars and head crest, which occasionally crashes with fully-opened wings, into Native Mulberry foliage, as a strategy for capturing grasshoppers such as *Valanga irregularis*.

It would be interesting to confirm if the two *Dendrocnide* spp. and *Urtica* spp. leaf-eating beetles *Hoplostines viridipennis* Blackburn (Coleoptera : Chrysomelidae) and the melolonthin beetle *Diphucephala* sp. (Coleoptera : Scarabaeidae) also feed on Native Mulberry leaves. On the 8 Dec.1999, I collected both these green-beetle species from Stinging Nettle ( *Urtica* sp. ) at Gambubal, near Warwick,



Scarab Beetle



Queensland, and confined them on Native Mulberry. In this forced situation, both species ate Native Mulberry leaves.

## ACKNOWLEDGMENTS

I wish to thank Dr Don Sands who is promoting the planting of insect foodplants, ( as is The Butterfly & Other Invertebrates Club ) and who has provided interesting discussion on Native Mulberry insects. I also wish to thank Lois Hughes for her illustrations.

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*Murdoch De Baar*



## BUTTERFLY GARDENING

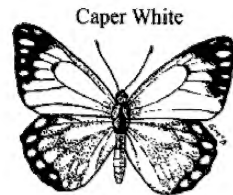
### PART 3 - RAINFOREST GARDENS

Rainforest plants for butterflies can be grown on almost any soil type provided that soil drainage is adequate, (ie water must not collect after rain) and a thick layer of organic mulch (Minimum 10 cm thick) is maintained for at least 4 years after planting. This discourages weeds, promotes soil fertility (via worms), keeps the soil cool in summer, warm in winter and also improves the drainage and aeration of heavy clay soils.

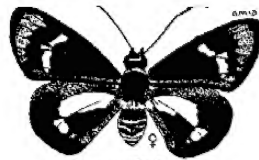
The minimum area of such a plot is regarded as 10 metres x 10 metres and should be a square, oval or round shape to minimise 'edge effects'. If your land area is quite small then choose a framework of smaller canopy trees (their roots will not be a problem). These plants are listed below with the butterfly species in brackets.

#### Small Canopy Trees

- \* *Alectryon connatus* (Six Line-blue, Hairy Line-blue, Glistening Blue and many other 'blues')
- \* *Capparis arborea* (Australian Gull, Pearl White, Caper White, Chalk White)
- \* *Cryptocarya triplinervis* (Blue Triangle)
- \* *Cupaniopsis newmanii* (Blues - various)
- \* *Diospyros australis* (Cephenes Blue)
- \* *Neolitsea dealbata* (Blue Triangle, Eastern Flat)
- \* *Polyscias elegans* (Consimilis Blue)
- \* *Wilkiea macrophylla* (Regent Skipper)
- \* *Pipturus argenteus* (White Nymph)



Caper White



Regent Skipper

If your land area is larger you may plant a canopy of taller trees first (plant at 2 metre - 2.5 metre centres) and then fill in with understorey species and vines in later years.

#### Larger Canopy Trees

- \* *Podocarpus elatus* (Eastern Flat)
- \* *Melicope elleryana* (Nectar Tree)
- \* *Endiandra* spp. (Blue Triangle, Macleay's Swallowtail, Eastern Flat)
- \* *Cryptocarya erythroxylon* (Blue Triangle)
- \* *Castanospermum australe* (Pencilled Blue)
- \* *Alphitonia excelsa* (Copper Jewel, Fiery Jewel, Indigo Flash, Small Green-banded Blue)
- \* *Cassia marksiana* (Lemon Migrant, Common Migrant)

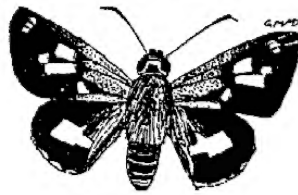


Macleay's Swallowtail



Rainforest shrubs and understorey plants may be added now or within 1 - 2 years of planting the trees. Some examples of butterfly hosts for a rainforest plot are

- Shrubs and Understorey Plants
- \* *Lomandra hystrix* (various Skippers)
  - \* *Lomandra longifolia* (Symmopus Skipper, other Skippers)
  - \* *Lomandra spicata* (various Skippers)
  - \* *Dianella caerulea* (Yellow Banded Dart, Large Dingy Skipper)
  - \* *Gahnia clarkei* (Swordgrass Brown)
  - \* *Citriobatus pauciflorus* (Bright Copper)
  - \* *Micromelum minutum* (Orchard Swallowtail, Capaneus Swallowtail)
  - \* *Citrus australasica* (Orchard Swallowtail, Capaneus Swallowtail)
  - \* *Wilkiea hugeliana* (Regent Skipper)
  - \* *Zieria smithii* (Orchard Swallowtail)

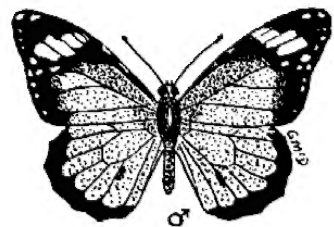


Symmopus Skipper

Care should be exercised when planting large vines such as *Callerya* and *Mucuna* as they can easily overrun a small rainforest plot. They will need a heavy supporting tree or trellis. When in doubt, choose smaller vines such as *Dioscorea* or a vine which can be pruned as a shrub such as *Melodorum*.

#### Vines

- \* *Callerya megasperma* (Pencilled Blue, Large Banded Awl)
- \* *Dioscorea transversa* (Black and White Flat)
- \* *Melodorum leichhardtii* (Pale Green Triangle, Four-bar Swordtail)
- \* *Mucuna gigantea* (Common Aeroplane, Green Awl, Pea Blue)
- \* *Parsonsia straminea* (Common Crow, Lesser Wanderer)
- \* *Pararistolochia praevenosa* (Richmond Birdwing, Large Greasy)
- \* *Secamone elliptica* (Common Crow, Blue Tiger, Lesser Wanderer?)
- \* *Smilax australis* (Cephene's Blue, Miskin's Jewel)



Lesser Wanderer

Other plants are listed in my book on pages 30 - 36.

The advantages of growing a rainforest are many and include very low or low maintenance in years to come, plants are long-lived and hardly ever need replacing and the trees provide a framework for other plants which add to the 'lush tropical' atmosphere.

(Sketches kindly supplied by Graham)

Graham McDonald



**Butterflies of Australia – Their Identification, Biology and Distribution by Michael F. Braby**

The following comments on this 2 volume set of books are by members of BOIC.

It's wonderful to see how the knowledge base about butterflies has grown since the publication of Common & Waterhouse's authoritative text. Mike and his colleagues have done a brilliant job. Given the expense, and therefore impracticality, of having colour photos on every page, the idea of having black and white images that indicate the diagnostic features of the wing patterns is extremely useful, possibly even more so than a colour image with no information about diagnostic features. I'm also impressed by the clarity of how it has been set out and its readability. Because so many butterflies are known by their common names, Mike has taken pains to give some butterflies much more descriptive common names, it is very useful that other common names have been listed as well. I also find the maps very informative, especially including the seasonal information. Well done Mike!

**Helen Schwencke**

**Common Names** – With the arrival of Michael's new books we now have a set of common names which we, as a club, should use to promote the conservation and well-being of butterflies (and by extension other invertebrates as well).

This list of names was originally flagged in "a provisional list of common names for Australian Butterflies" by Braby et al in issue 36 of the Australian Journal of Entomology 1997. Michael and his co-authors invited reader comment on the suitability of the proposed names and many suggestions were made - by our club among others. Further changes were actually made to around 7% of the species and it is hoped that there is now a general consensus on the current names out there in "Butterfly Land".

The adoption (and promotion) of these names by all can only result in an increased community awareness of butterflies and their conservation and as a club this is central to our being.

Congratulations Michael (and your many assistants) on a job well done.

**Rob MacSloy**

This publication is wonderfully user-friendly, comprehensive and superb.

**Frank Jordan**



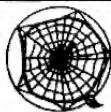
The one hundred and 22 Australian species of skippers (family Hesperidae) of which nearly 2/3 are endemic, comprise about 1/3 of our butterfly fauna. It is pleasing to see this difficult group of the butterflies treated so effectively with a clarity not seen in previous publications. The descriptions, life histories, diagrams and colour plates are of a very high standard, and have enabled me to accurately place every specimen in my collection. Michael has leant heavily on the work of our foremost skipper authority, Andrew Atkins of Newcastle, with the result that this section is both accurate and up-to-date at the time of publication.

**John Moss**

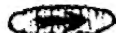
What a tremendous asset this book is proving to be for me. Finding accurate reference material for the illustrations in the Newsletter and my paintings has been a constant struggle. The clear colour photographs depicting both male and female butterflies above and beneath has made my work much easier and more enjoyable. Another area the book has proved invaluable in is in the clear line drawings of the veins for the different butterfly families. I no longer have to guess where they are when a photograph or specimen is indistinct or has areas missing. The text is also very understandable for someone like myself with no scientific knowledge but lots of curiosity and a desire to learn. Congratulations on a magnificent publication.

**Lois Hughes**

#### YOU ASKED



Can anyone identify these larvae I found on Emu Foot. They are similar in shape and size to lycaenid larvae, are a Bright green colour with maroon/brown markings Surrounded by yellow. They have a peculiar "humping" movement which reminds me of a seal or sea lion.



From above



When moving

**Lois Hughes**



You most likely found the terrestrial larvae of one of the Hover Flies (Order DIPTERA, Family SYRPHIDAE). John Goode in his "Insects of Australia" gives the following excellent description of this group of insects:

Common, especially in the spring months when they are frequently seen hovering above or resting on flowers, these insects seem similar to bees or wasps with dark brown bodies banded with yellow. The most distinguishing feature is their ability to hover almost motionless, with their wings vibrating so quickly that they are only a blur. If approached, they dart away and resume their hovering some distance from the original spot.





The larvae of the 168 species (in 1980 - ed.) known in Australia are mostly terrestrial but conspicuous aquatic larvae are the 'rat-tailed maggots'. They are called this because of the telescopic 'snorkel' at the back of the body. These 'rat-tailed maggots' breed in drains, sewage pools, polluted ponds and other stagnant water and have even been found in the remains of decaying animals. Although these larvae live on decaying organic matter, they must breathe air; for this, the breathing tube is extended or contracted depending on the depth of the liquid in which they are feeding.

The species *Syrphus viridiceps* is a thin, yellow-banded fly with deposits its eggs singly among aphids. The larva is a pale green and has sharp mouthparts which it uses to impale aphids. Once it has captured its prey, the larva stands upright on its hind prolegs and in this position extracts the body fluids of its prey.

Larvae and pupae of the species *Microdon variegatum* often live in ants' nests, picking up food where they can find it.

Wasp mimics are found in the genera *Ceriana* and *Baccha*. Among the bee mimics, another species flies with the bee it mimics. Drone flies are an introduced hover fly that is very similar to the honey bee.

F. D. Hockings in his "Friends and Foes of Australian Gardens" considers that hover flies are very beneficial insects, with their larvae being very important for the control of aphids, thrips, scale insects and other small pests. *Helen Schwencke*

#### FROM OTHER GROUPS' PUBLICATIONS

The following article of interest has been reproduced from the newsletter of another group.

Reproduced from **Bush Telegraph** a newsletter of Fairhill Native Plants, Fairhill Road, Yandina. No. 33 Sep. 2000

##### **Cliff's Butterfly Garden**

On the 31<sup>st</sup> of May Wednesday Club members got stuck into Fairhill's gluggy clay to plant over 50 butterfly attracting trees and shrubs. The planting was in memory of Cliff Whiteoak, a much loved Wednesday Clubber who died on May 5<sup>th</sup> this year. "Cliff's Butterfly Garden" is a fitting tribute to a man who was a keen observer and chronicler of wildlife – in particular birds and butterflies. Cliff was also active in the Queensland Biodiversity program and in producing the Rhythms of Life Calendar.

At the last Wednesday club meeting on the 30<sup>th</sup> of August a further 40 species were added to the garden – this time the clay was brick hard! In spite of the harsh





conditions – frosts and poor soil – all but one of the plants from the first planting survived and we expect a good survival rate for the second planting.

If you'd like to check the progress in Cliff's Butterfly Garden, you will find it on the southern boundary about 50 metres ahead of the steep steps leading up from the River Track. We are looking forward to the first signs of butterfly activity – chewed leaves and caterpillars.

### **Butterfly Host and Nectar Plants**

Host plants are food plants for butterfly larvae (caterpillars). The butterfly lays her eggs on specific plants. After hatching the caterpillar feeds on the host plant, casting off its skin several times as it grows. When it reaches full size it attaches itself to a leaf or stem. Finally its skin splits again to reveal the chrysalis from which, after a few weeks, a butterfly will emerge. Soon after emerging and pumping up its wings, the butterfly flutters off looking for nectar plants.

These are of the host (larval food plants) and nectar plants in Cliff's Butterfly Garden. A more comprehensive list of butterfly plants is available at the nursery.

**Brush Cassia** (*Cassia brewsteri* var. *marksiana*). A bushy tree 8 to 10m tall. In spring it is covered with pendulous racemes of fragrant, bright yellow flowers. Long cylindrical seed pods mature in winter. Food plant for Tailed Emperor, Lemon Migrant and White or Common Migrant.

**Flintwood** (*Scolopia braunii*). This ornamental rainforest tree grows 5 to 8m high. It has a compact, conical shape and glossy leaves with attractive amber to red new growth. Clusters of small, sweetly scented flowers in spring are followed by dark red to black berries. It is hardy in sun or shade. Food plant for Australian Rustic Butterfly. Nectar plant.

**Creek Sandpaper Fig** (*Ficus coronata*). A bush tree 5 to 7m tall with sandpapery leaves and succulent purple to black fruit. The fruit ripening mainly from January to June but also at other times attracts a variety of birds and fruit bats. Food plant for the Common Moonbeam.

**Native Mulberry** (*Pipturus argenteus*). Fast growing spreading shrub or small tree 4 to 8m high with silvery, hairy new growth. Clusters of insignificant small white flowers are followed by edible, sweet, juicy, white fruit the size of small mulberries. Food plant for White Nymph.

**Coffee Bush** (*Breynia oblongifolia*). Growing 2 to 3m high, this is a hardy shrub with attractive foliage. It carries small, pendulous, greenish flowers and small globular red fruit all year. Birds are attracted to the fruit. Food plant for Common Grass Yellow.

**Zig-Zag Vine** (*Melodorum (Rauwenhoffia) leichhardtii*). A bush climber that can be pruned to a shrub. Fragrant orange-brown flowers in autumn are followed by waxy,



orange elongated fruit with a pleasant, acid, edible flesh. Food plant for the Fourbar Swordtail and Pale Green Triangle.

**Hollywood** (*Pittosporum rhombifolium*). A bush tree 5 to 7m high with a neat pyramidal shape and glossy holly-shaped leaves. Dense heads of small white flowers in summer are followed by masses of orange berries in autumn. Nectar plant.

**Silky Myrtle** (*Decaspermum humile*). Shrub or small tree 4 to 6m high with glossy foliage and attractive silvery pink new growth. During autumn it produces a profusion of fluffy perfumed white flowers. Nectar plant.

**Twiggy Heath Myrtle** (*Baeckea virgata*). This tall shrub has a graceful weeping habit. During summer it produces a profusion of small starry white flowers. The seed which ripens in autumn is eaten by birds. Nectar Plant.

**Pavetta** (*Pavetta australiensis*). This is a handsome shrub with clusters of deep green, glossy leaves. It carries large clusters of fragrant white flower during autumn, winter and spring. Nectar Plant.

**HAVE YOU GOT AN INVERTEBRATE STORY TO TELL? THIS MAGAZINE IS FOR THE MEMBERS TO SHARE THEIR OBSERVATIONS AND EXPERIENCES SO PLEASE CONTRIBUTE.**

#### WORLD WIDE WEB SITES TO WATCH

Two of our members have web sites which you may wish to visit.

1. Don Herbison-Evans site on butterfly life histories with colour images of larvae, pupae and adults is at <http://www.usyd.edu.au/macleay/larvae/>
2. Ross Kendall has set up a butterfly business supplying pupae to the general public and educational kits to schools. <http://butterflyencounters.com.au/body.htm>

#### INVERTEBRATE ATTRACTIVE PLANTS

##### **Invertebrate Attractive Plants in the Barnes Wildlife Garden**

David and Margery Barnes have created a wildlife garden at Bracken Ridge that includes many plants which are attractive to invertebrates, either as food or nectar plants. The family makes their garden available for viewing by the public as part of the Open Garden Scheme.

These plants include:



*Backhousia citriodora* (Lemon Ironwood). The flowers are a food source for insects and adult butterflies.

*Breynia oblongifolia* (Coffee Bush). Birds eat the fruit, the leaves are host to the Common Grass Yellow butterfly (*Eurema hecabe*) caterpillars.

*Hibiscus splendens*. Hibiscus Harlequin Bugs are attracted by this plant.

*Linospadix monostachya* (Walking Stick Palm). The leaves are the food source for Orange and Yellow Palm Dart caterpillars and the fruit are edible.

*Mallotus claoxyloides* (Smell of the Bush) - distinctive bush smell particularly on hot days.

*Evodiola muelleri* (Little Evodia). The flowers attract Blue Triangle (*Graphium sarpedon*) butterflies.

*Microcitrus australis* (Finger Lime) - host to the Dainty and Orchard Swallowtail butterflies, the prickly stems are a possible nest sites for birds, the fruit are edible.

*Pavetta australiensis* (Pavetta) - white flowers attract adult butterflies, and the plant is host to the Bee Hawk Moth.

*Bracteantha bracteata* (Everlasting Daisy). The flowers attract the Australian Painted Lady and Common Crow butterflies. Painted Lady caterpillars feed on the leaves.

*Dianella caerulea* (Blue Flax Lily) is host for the Yellow Banded Dart and the Large Dingy Skipper Butterflies.

*Hygrophila angustifolia* (Karamat) may be host to the Brown Soldier, Meadow Argus, Blue Argus, and Tiny Grass-blue butterflies.

*Hypoestes floribunda*. Blue Banded Bees and other insects are attracted to the flowers.

Lomandras generally are host for a number of the Skipper butterflies and provide cover for ground dwelling fauna.

*Themeda triandra* (Kangaroo Grass). The leaves are a food source for the Evening Brown (*Melanitis leda*) and other butterfly caterpillars.

*Baeckea virgata*, *B. imbricata* and *B. "Clarence River"*. The flowers attract insects and adults of Common Australian Crow (*Euploea core*). *Parsonsia straminea* (Monkey Rope) and *Hoya australis* (Wax Flower) are host to the Common Australian Crow butterfly caterpillars.

*Plectranthus argentatus*. The flowers attract hoverflies.

*Viola betonicifolia* (Arrowhead Violet) is host to the endangered Australian Fritillary butterfly.

*Myoporum acuminatum*. Saltpan Blue butterflies feed from flowers.

*Poa labillardieri* (Tussock Grass) is host for a number of Skipper butterflies.

*Plumbago zeylanica* is the host for the Zebra Blue butterfly.



*Pseuderanthemum variable* (Love Flower). The leaves are the food source for the Australian Leaf Wing (*Doleschallia bisaltide*), Common Eggfly and Danaid Eggfly butterflies.

The Club would like to thank David and Margery for providing this information about their garden. We would also like to thank them for their invitation to participate during the open days and their generous support for the Club.

Helen Schwencke

#### LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

*Australia's Butterflies*, by Peter Wilson  
*Butterfly Magic*, by Helen Schwencke and Frank Jordan  
*Australian Cicadas*, by Max Moulds  
*Butterflies of Australia*, by Common and Waterhouse, 1981  
*Butterfly Watching*, by Paul Whalley  
*Flying Colours*, by Mike and Pat Couper  
*All Colour Book of Butterflies*, by Robert Goodden  
*Lifecycle of the Ulysses Butterfly*, Video, by Janet Richardson  
*Lifecycle of the Cairns Birdwing Butterfly*, Video, by Janet Richardson

#### BACK ISSUES

**Back Issues of the Club Magazine are available at a cost of \$1 each plus postage (3-6 copies - \$1.50. 1-2 copies \$1.10)**

#### ADS AND EXCHANGES

Sometimes you may have an oversupply of legally obtained caterpillars of non restricted species and your food supply will not hold out. If this happens, contact Rob MacSloy - 07 3824 4348 - who operates the Register of Host Plants. He can put you in touch with prospective "foster parents". Have YOU advised Rob of the host plants you have available?

\*\*\*\*\*

**Butterfly Host Plants are available from Barb's Trees, The Native Plant Growers' Network, 15 Jagger St., McDOWALL, 4053. Ph. 07 3353 8182. See advertisement enclosed.**

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The poster, Swallowtails of South East Queensland, compiled by the BOIC, can be obtained from BOIC, PO Box 2113, Runcorn, 4113. The cost for members is \$8 plus \$5 postage and handling. Non-members \$12 plus \$5 postage handling.



## BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

### **Dutton Park Butterfly Habitat & AGM**

**When:** Sunday, 21st January, 2001, 1:30 - 3:30pm

**Where:** Harmony Gardens & Dutton Park Scout Den, Waterview Tce off Pope St., Dutton Park

**What:** Club members will be given a guided tour of the regeneration work being undertaken at Harmony Gardens behind the Scout Den. This is a joint project by Club members in association with the Scout Group. The site is being revegetated with butterfly host plants. A short AGM will precede the tour. Please come to make up the quorum.

**Contact:** Helen 3844 6677, fax 3844 4333, email [hschwenc@dovenetq.net.au](mailto:hschwenc@dovenetq.net.au)

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### **Stockyard Creek Visit & Butterfly Club Planning and Management Meeting**

**When:** Sunday, 11th February, 2001, 1:00 - 5:30pm

**Where:** Meet at John Moss's place for a short meeting to be followed by a visit to nearby Stockyard Creek, habitat for many butterflies

**Contact:** John for address and details, 3245 2997, or Helen 3844 6677

**Bring:** Afternoon tea and invertebrate repellent (unless you want them to let them have a meal)

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### **Alexandra Hills Conservation Area walk to be led by Steve Homewood, Bushcare Group Coordinator**

**When:** Sunday 25th March, 2001 starting 10.30am

**Where:** Meet at the park in Wimbourne Rd, opposite Chipping Drive, Alexandra Hills (2000 UBD Map 204, reference L-M3)

**What:** We will be walking through the Conservation area, looking at butterfly host and other plants in the reserve.

**Bring:** Your own lunch to eat in the park after the walk

**RSVP/Contact:** Helen 3844 6677, fax 3844 4333, email [hschwenc@dovenetq.net.au](mailto:hschwenc@dovenetq.net.au)

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*If you plan to attend any of the above events please respond to the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.*



#### DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

#### ACKNOWLEDGMENTS

Producing this newsletter is done due to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provided illustrations and developed the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing
- Helen Schwencke who developed the overall design and works on content
- Frank Jordan for inspiration

We would like to thank all these people for their contribution

#### ARE YOU A MEMBER

*Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.*

*Membership fees are \$10.00 for Individuals/Schools and \$15 for family membership.*

**Butterfly and Other Invertebrates Club Inc.**

c/- PO Box 2113

Runcorn Q 4113

**Next Meeting: 21.1.2001 – AGM and guided tour of Dutton Park's  
Harmony Gardens regeneration work.**



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